Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

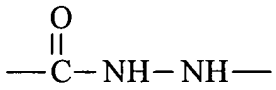
1. (currently amended) A method of producing an oligopeptide product, the method comprising the steps:

a) providing a first oligopeptide, the first oligopeptide having a reactive moiety,

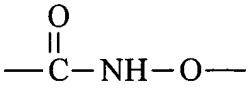
b) providing a second oligopeptide, the second oligopeptide having an activated ester moiety, and

c) allowing the reactive moiety of the first oligopeptide to react with the activated ester moiety of the second oligopeptide to form an oligopeptide product, in which the first and second oligopeptides are linked via a linking moiety having Formula I, Formula II or Formula III:

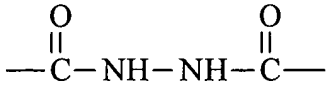
Formula I



Formula II



Formula III



2. (previously presented) The method according to claim 1 wherein the activated ester moiety is a thioester moiety wherein the second oligopeptide is the acyl substituent of the thioester moiety.

3. (previously presented) The method according to claim 2, wherein said second oligopeptide having said thioester moiety is generated by thiol reagent dependent cleavage of a precursor molecule, said precursor molecule comprising the second oligopeptide fused N-terminally to an intein domain.

4. (currently amended) A method of producing an oligopeptide product, the method comprising the steps:

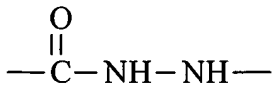
a) providing a first oligopeptide, the first oligopeptide having a reactive moiety,

b) i) providing a precursor oligopeptide molecule, the precursor oligopeptide molecule comprising a polypeptide fused N-terminally to an intein domain,

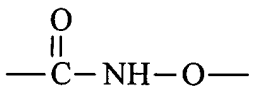
ii) allowing thiol reagent dependent cleavage of the precursor oligopeptide molecule to generate a second oligopeptide molecule, said second oligopeptide molecule having a thioester moiety at its C-terminus, and

c) allowing the reactive moiety of the first oligopeptide to react with the second oligopeptide molecule to form an oligopeptide product, in which the first oligopeptide and the second oligopeptide molecule are linked via a linking moiety having Formula I, II or III:

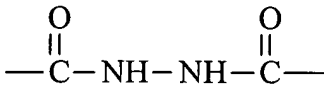
Formula I



Formula II



Formula III



5. (previously presented) The method according claim 1 wherein the reactive moiety is a hydrazine moiety, a hydrazide moiety or an aminooxy moiety.

6. (previously presented) The method according to claim 5, wherein the reactive moiety is an aminooxy moiety and the activated ester moiety is a thioester moiety.

7. (Original) The method according to claim 5, wherein said first oligopeptide is produced by reaction of hydrazine with a precursor molecule, said precursor molecule comprising a precursor oligopeptide fused N-terminally to an intein domain via a thioester moiety.

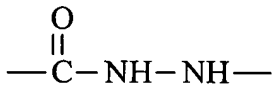
8. (previously presented) A method of producing an oligopeptide product, said method comprising the steps:

a) providing a first oligopeptide, the first oligopeptide having a reactive moiety, wherein the reactive moiety is a hydrazine moiety, a hydrazide moiety or an amino-oxy moiety;

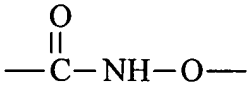
b) providing a precursor oligopeptide molecule, the precursor oligopeptide molecule comprising a second oligopeptide fused N-terminally to an intein domain; and

c) allowing the reactive moiety of the first oligopeptide to react with the precursor oligopeptide molecule to form an oligopeptide product, in which the first and second oligopeptides are linked via a linking moiety having Formula I, Formula II or Formula III:

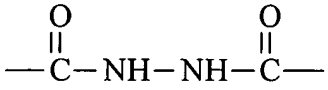
Formula I



Formula II



Formula III



9. (previously presented) The method according to claim 1 or 8, wherein the first oligopeptide or the second oligopeptide is a recombinant oligopeptide and the other of the first oligopeptide and the second oligopeptide is a synthetic oligopeptide.

10. (previously presented) The method according to claim 1 or 8, wherein the first oligopeptide and the second oligopeptide are recombinant oligopeptides.

11. (previously presented) The method according to claim 1 or 8, wherein the first oligopeptide and the second oligopeptide are synthetic oligopeptides.

12. (previously presented) A method of generating a protein hydrazide, said method comprising the steps:

(a) providing a protein molecule comprising an oligopeptide fused N-terminally to an intein domain, and

(b) reacting said protein molecule with hydrazine, such that the intein domain is cleaved from the oligopeptide to generate a protein hydrazide.

13. (previously presented) The method according to claim 1 wherein step (c) of the method is performed at a pH in the range pH 6.5 to 7.5.

14. (previously presented) A method of producing an oligopeptide product, the method comprising the steps:

a) providing a first oligopeptide, the first oligopeptide having an aldehyde or ketone moiety,

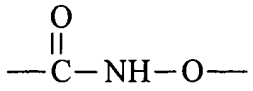
b) providing a precursor oligopeptide molecule, the precursor oligopeptide molecule comprising a second oligopeptide fused N-terminally to an intein domain,

c) reacting said precursor oligopeptide molecule with hydrazine to generate an intermediate oligopeptide, said intermediate oligopeptide having a terminal hydrazide moiety, and

d) allowing the aldehyde or ketone moiety of the first oligopeptide to react with the hydrazide moiety of the intermediate oligopeptide to form an oligopeptide product, in which the first oligopeptide and the second oligopeptide are linked via a hydrazone linking moiety.

15. (currently amended) An oligopeptide product produced by the method of claim 1 or 8 ~~any one of claims 1, 8 or 14~~, in which the first and second oligopeptides are linked via a linking moiety having Formula II:

Formula II



16. (canceled)

17. (canceled)

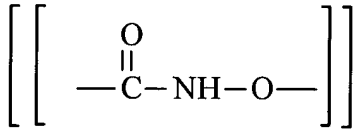
18. (currently amended) A method of labelling an oligopeptide, the method comprising the steps:

a) providing a label molecule, the label molecule having an activated ester moiety of which the label is the acyl substituent,

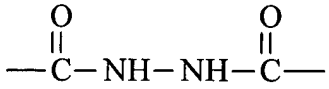
b) providing the oligopeptide, the oligopeptide having a reactive moiety, and

c) allowing the activated ester moiety of the label molecule to react with the reactive moiety of the oligopeptide to form a labelled oligopeptide, in which the label molecule and the oligopeptide are linked via a linking moiety having ~~Formula II or~~ Formula III:

~~Formula II~~



Formula III



wherein, in step (c), where said label molecule and the oligopeptide are linked via a linking moiety having Formula II and where said activated ester moiety of said label moiety is not a thioester moiety, said activated ester moiety is a terminally activated ester moiety.

19. (Original) The method according to claim 18 wherein said oligopeptide is produced by reaction of hydrazine with a precursor molecule, said precursor molecule comprising a precursor

oligopeptide fused N-terminally to an intein domain via a thioester moiety.

20. (previously presented) A method of labelling an oligopeptide, the method comprising the steps:

a) providing a label, the label having a reactive moiety,

b)(i) providing a precursor oligopeptide molecule, the precursor oligopeptide molecule comprising an oligopeptide fused N-terminally to an intein domain,

(ii) allowing thiol reagent dependent cleavage of the precursor oligopeptide molecule to generate said oligopeptide, said oligopeptide having a thioester moiety at its C-terminus, and

c) allowing the reactive moiety of the label to react with the oligopeptide of step (b)(ii) to form a labelled oligopeptide, in which the label and said oligopeptide are linked via a linking moiety having Formula III:

Formula III

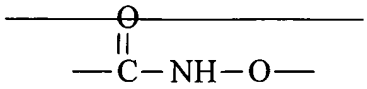
21. (currently amended) ~~The method according claim 18,~~ A method of labelling an oligopeptide, the method comprising the steps:

a) providing a label molecule, the label molecule having an activated ester moiety of which the label is the acyl substituent,

b) providing the oligopeptide, the oligopeptide having a reactive moiety, and

c) allowing the activated ester moiety of the label molecule to react with the reactive moiety of the oligopeptide to form a labelled oligopeptide, in which the label molecule and the oligopeptide are linked via a linking moiety having Formula II:

Formula II



wherein, in step (c), where said label molecule and the oligopeptide are linked via a linking moiety having Formula II and where said activated ester moiety of said label moiety is not a thioester moiety, said activated ester moiety is a terminally activated ester moiety, wherein the reactive moiety is an aminooxy moiety and the activated ester moiety is a thioester moiety.

22. (canceled)

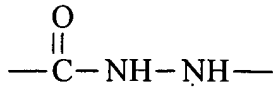
23. (previously presented) A method of labelling an oligopeptide, the method comprising the steps:

a) providing a label molecule, the label molecule having a reactive moiety,

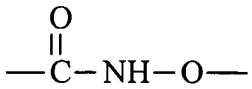
b) providing a precursor oligopeptide molecule, the precursor oligopeptide molecule comprising an oligopeptide fused N-terminally to an intein domain, and

c) allowing the reactive moiety of the label molecule to react with the precursor oligopeptide molecule to form a labelled oligopeptide product, in which the label molecule and the oligopeptide are linked via a linking moiety having Formula I, Formula II or Formula III:

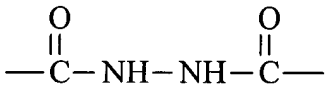
Formula I



Formula II



Formula III



24. (canceled)

25. (previously presented) A method of labelling an oligopeptide to produce a labelled oligopeptide product, the method comprising the steps:

a) providing a label molecule, the label molecule having an aldehyde or ketone moiety,

b) providing a precursor oligopeptide molecule, the precursor oligopeptide molecule comprising a first oligopeptide fused N-terminally to an intein domain,

c) reacting said precursor oligopeptide molecule with hydrazine to generate an intermediate oligopeptide molecule, said intermediate oligopeptide molecule having a terminal hydrazide moiety, and

d) allowing the aldehyde or ketone moiety of the label molecule to react with the hydrazide moiety of the intermediate oligopeptide molecule to form a labelled oligopeptide product, in which the label molecule and oligopeptide are linked via a hydrazone linking moiety.

26. (Original) The method according to claim 14 or claim 25, wherein the aldehyde or ketone moiety is an α-diketone or an α-keto-aldehyde group.

27. (canceled)